State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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June 21, 1999

Johnny Pappas, Senior Environmental Engineer
Cyprus Plateau Mining Corp.
Willow Creek Mine
847 Northwest Highway 191
Helper, Utah 84526

Re: Willow Creek As-Builts, Cyprus Plateau Mining Company, Willow Creek Mine, ACT/007/038-98G, File #2, Carbon County, Utah

Dear Mr. Pappas:

The technical analysis for the referenced amendment has been completed by our staff. The following information is a compilation of their reviews. There are several deficiencies that are identified by regulation for your convenience in responding. We would ask that you respond to these deficiencies by no later than July 6, 1999.

Cyprus Plateau Mining Corporation (CPMC) has submitted an amendment to obtain approval for changes made during the mine construction at the Willow Creek Mine. The changes are included in four volumes submitted to the Division on April 30, 1999. Hydrology differs significantly from the approved plan which is amended based on the changes primarily completed during construction. This review focus is on the maps and text information.

Information regarding the K-Seam in-mine water was omitted as stated in the applicants cover letter: however, it is recommended that baseline information for wells, drilled to identify and characterize the K-Seam water and recharge source, be submitted to the Division to obtain input prior to finalizing a plan that might not be acceptable to the Division. The applicants cover letter also indicated that as-built information for Ponds 012A, 012B, and culvert DC-24 still needs to be submitted. In addition, the reclamation plan is no longer complete, due to changes made to the operations configuration. The reclamation plan will not be considered in this review but, the Division needs to make sure the Reclamation Plan becomes updated.

This submittal was first reviewed by R. Davidson in December 1998 for soils. The recent information (dated 5/14/99) documents field changes made during and after construction, including amendment modifications for the Clean Coal Stockpile Expansion, degassification wells, and Barn Canyon Shaft. Tables 4-2.1, 4-2.1A, 5-4.1, Plate 3.1-1 and section 5.2.2.2 require some modification.

ENVIRONMENTAL RESOURCE INFORMATION

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.19; R645-301-320.

Analysis:

Changes have been made to Table 3.2-2, but the information in the table is not presented in a clear and concise manner. In Table 3.2-2 the total disturbed area acreage is shown to be 55.57 acres, that figure appears correct. However, the information in Table 3.2-2 does not clearly show how the acreage figure for previous disturbance areas, 45.23 acres, relates to the acreage figures for "Previously Disturbed--Unreclaimed" and "AML Reclamation" areas at the bottom of the table, 63.9 acres. These two figures should be the same. The applicant needs to explain these differences and reconcile them.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-321, It is unclear why the acreage figures in Table 3.2-2 do not match, and the application needs to either explain the differences or reconcile the figures.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

General

Vegetative cover, as used for the curve number (CN) vegetation, was not found in the vegetative information for the area. Vegetation and Soils were not mapped for watershed areas extending beyond the permit and could not be used to verify CNs; However, the CNs used were reasonable for this region. Designs for drainage and sediment control measures for this amendment were not certified.

Groundwater

Page 4.7.10 continues to indicate water will not be pumped to the surface even though water currently is being pumped to the surface.

Surface Water Rights

The plan updated the quantity of acre feet withdrawn from the Price River. Previous requirements were projected to be 90 acre feet/year on page 4.7-37. This was changed to 730 acre feet/year the plan and now reflects values also presented on page 4.7-11.

Stream buffer zones.

The approved plan shows the 100-foot buffer zone was to be maintained through the facilities area except in a 200-foot segment at the main access road bridge crossing, and along an 800-foot length of Willow Creek reconstruction. The final construction resulted in reduced buffer zones along two linear stretches, 300 feet long, totaling 600 feet plus the 800 linear feet Willow Creek reconstruction.

The applicant has proposed removing maps showing the proposed stream channel configuration, pool riffle sequence and configuration. The existing segments disturbed within the buffer zone are delineated on Map 18 to identify the sections that are within the 100-foot buffer zone. See further discussions under **Diversions** in this TA.

The area at the northeast portion of the site is disturbed within the Willow Creek buffer zone. Since the bridge, previously approved for construction, was not installed in this location, the reason for disturbing this area is not clear. The reason for disturbing this area needs to be provided under discussion for the stream buffer zone disturbance.

The proposed Barn Canyon ventilation pad is within an ephemeral drainage. An existing road will be utilized for access and maintenance issues. The existing road is aligned within the canyon drainage. Stream buffer zone regulations are applicable by definition because the site drains a watershed greater than one square mile. Buffer zone approval is being completed in conjunction with the Barn Canyon approval amendment 98B.

Diversions.

The approved plan provided ditch and culvert designs sized for the 25-year, 24-hour precipitation event, while the as-builts are provided for the 10-year, 6-hour event. Although the 10-year, 6-hour event meets minimum regulatory requirements, all perimeter ditches should be designed to pass the greater peak flow from the 10-year, 24-hour event or 10 year 6-hour event. The greater peak flow from the 10-year, 24-hour event or 10 year 6-hour event is hereby required under R645-742.314 for the disturbed area perimeter drainage and undisturbed perimeter ditches and maintenance standards are to be held to this design measure. These measures are required to: 1) ensure the pond volume is retained for the design event by reducing the potential for undisturbed upstream drainage contributing runoff to the sedimentation pond, and 2) ensure the perimeter ditches adjacent to Willow Creek will continue to discharge to the pond for the 10 year, 24-hour event (minimum design requirements for the sedimentation pond).

Because changes were implemented in the field during construction and were not approved prior to implementation, their function in the field will determine the success with which regulatory intent is met. Areas noted below have the potential for contributing sediment off-site. Also the ditches labeled UD according to this plan means the drainage reports to Willow Creek and in some areas conveys disturbed drainage. These areas should be the focus, during drainage inspections conducted following or during runoff events.

- Refer to Map 23B: UP-5 and UP-4 convey disturbed area and road drainage to an undisturbed drainage.

- Refer to Map 23C: The map indicates the energy dissipator at the junction of UC-4 and UC-5 may be replaced with a drop inlet. The Division recommends that designs for the drop inlet is provided as this area could potentially commingle undisturbed and disturbed runoff.

- Refer to Map 23C: Overflow from the junction of DD-5 and DC-18 should not enter UP-12. The drainage UP-12 collects drains from a disturbed area and is shown to be treated with straw bales and silt fence and needs to be labeled as an ASCA.

- Refer to Map 23D: UC-10 should be monitored for potential erosion below the culvert. If an adequate bedrock/rock substrate is present on the adjacent stream bank the discharge may not be a problem.

- Refer to Map 23E: It is not clear whether UD22B is intended to report to the depression at the north end of the ditch 6156 ft elevation. If this depression overflows in a 10 year - 24 hour event it would report to the pond. Therefore, it is not clear whether ASCA 5 would report to Pond 12b for the required design event. UC-16 should be monitored for potential erosion at the culvert outlet. If any design changes resulted at Pond 12b from the as-built drainage they are not being reviewed at this time.

A 4" pipeline is provided to transfer water from pond 001 to 013. The plan also states that water from pond 001 will be pumped to other ponds as necessary. The plan needs to provide the volume and elevation for water to be contained in the pond that retains the runoff storage volume required for the design event. The method must also include a means for checking the elevation during an inspection.

The applicant has requested that maps 16, 27, 28, and 29 be removed from the plan. These maps contained the proposed willow creek channel configuration and design information that was used to reconstruct the channel. An as-built survey detailing how the reconstruction meets the details in the plan or varied from the details should be provided. The survey should include accounts of the pool riffle ratio in the reconstructed stream section. Design maps should be retained until a detailed as built survey is identified.

Sediment control measures.

Sedimentation Ponds

The sediment control plan for sedimentation ponds was changed to be designed for the 10-year 24-hour runoff event, previously presented as a 25-year 24-hour runoff event, page 4.5-40 in this amendment. Pond 001 was not completed according to the approved plan and pond 002 is designed with 0.1 foot between the decant and spillway elevation according to EZ13-18. Because there is more storage available in the pond, than is required to retain the designed runoff volume, the primary spillway elevation can be reduced. Reducing the riser elevation also increases the potential energy and the flow rate through the primary spillway so both the primary and emergency spillways may not be needed to pass the design event thorough the spillway on pond 002. Changes from the approved pond design and pond construction are identified for pond 001 in Table 1.

Table 1.

Proposed Design Sediment Pond 001 v.s. As-built

Element	Proposed	As-built	Comments
Area Draining to Pond	26 acres	40.92 acres	
Max Capacity Elevation/volume	6168.5 ft/ 6.88 acre feet	6169.2 ft/ 9.7 acre feet	

Proposed Design Sediment Pond 001 v.s. As-built

Max sediment capacity	.33 acre feet	1.32 acre feet	
Minewater discharge	0.1cfs/five day period	0.17 cfs/three day period	
Design capacity	25-yr, 24-hr 2.97	10-yr, 24-hr 3.16	
Excess Storage	2.58	4.88	
Primary Spillway vertical riser	6168.5	6169.2	Actual freeboard between primary and emergency is 0.3 feet. The designs show adequate excess storage capacity to primary. Additional freeboard between the primary and emergency spillway needs to be provided.
3-Orifice discharge	6165.5	6165.5	
Oil skimmer	Oil skimmer with trash rack	Trash rack only	An oil skimmer needs to be placed on the primary spillway.
Emergency Spillway	6168.5	6169.5	
Minimum freeboard	1.37	0.99 (text pg. 4.5-50)	
Embankment top width	40 ft	20ft	Elements for stability should be reviewed by an engineer.
Side slopes	on all impoundments not steeper than 2H:1V	Commitment removed: actual steepest side slope not provided.	Elements for stability should be reviewed by an engineer. See pg. 4.7-25.
Pond Embankment	Not located in text	6170.95	

Variations in approved and implemented plans at the Willow Creek Mine also include removal of Pond 003 and redesign of pond 12A and 12B. Pond 12A and 12 B are not reviewed or approved at this time. According to the cover letter dated April 30, 1999 sediment ponds 12A and 12B need additional resurveying and will be submitted later.

The text in the permit states that the MSHA pond will be inspected quarterly on some pages; and weekly or, as authorized by MSHA on other pages. No MSHA authorization was provided in the plan.

Alternate Sediment Control Measures

The previous plan approved 3 ASCA (Alternate Sediment Control Areas). The as-built has 6

ASCA and one area that is not labeled as such. ASCA-1 and associated drainage were constructed to report to an undisturbed area drainage. The road drainage should be made to report to the sedimentation pond as the best technology currently available.

ASCA-4 is provided in the area adjacent to the west portal long tunnel. This area is treated with sediment retention basin and silt fence or straw bales. ASCA-1 is provided for the methane pump station using a gravel berm and a silt fence with a notch. As these were not part of the approved plan, designs were not reviewed. The standards for success will be determined by the inspector in the field.

Water quality standards and effluent limitations.

The transfer of minewater from Sediment Pond No. 001 to Sediment Pond 003 is shown on Map 18B. This pipe is proposed to be used to transfer water to other ponds as well. However, the plan needs to describe the proposed method transferring water to other ponds, and needs to show that the sedimentation ponds can still meet the sizing criteria and effluent limitations. Presently, the applicant cannot discharge the underground mine water. Discharge from ponds containing minewater will have to show compliance with the UPDES permit before discharge.

Findings:

This amendment does not meet the minimum requirements of this section. The amendment must include the following:

R645-301-731.200. Table 4.7-2, needs to clearly distinguish between operational and baseline water monitoring. Table 4.7-2 in Exhibit 12, of the existing plan and Table 3 under chapter 2.1 need to be consistent.

R645-742.314. Although the 10-year, 6-hour event meets minimum regulatory requirements, all perimeter and tributary ditches transporting undisturbed upstream drainage and disturbed area drainage along the perimeter of Willow Creek to the sedimentation pond, are hereby required to pass and be maintained for the greater design peak flow resulting from the 10-year, 24-hour event or 10 year 6-hour event by R645-742.314. Text in the plan will state that maintenance standards will be held to this design measure. Since the plan was approved based on a 25-year, 24-hour design, and most if not all ditch configurations presently exceed these standards, the standard is reasonable. The design standard will increase success in meeting minimum requirements for treating runoff by: 1) eliminating contribution from undisturbed upstream drainage to the pond in an event greater than the 10-year 6 hour event but, less than the 10 year 24 hour event, and 2) ensure the perimeter ditches adjacent to Willow Creek will continue to discharge to the pond and be treated for the 10 year, 24-hour event (minimum design requirements for the sedimentation pond).

R645-301-712. Provide certification for drainage and sediment control measures designs for this amendment.

R645-301-120. Provide a plan that is complete, clear and concise. 1) correct page 4.7.10, which indicates water will not be pumped to the surface even though water currently is being pumped to the surface.

R645-301-742. The drainage UP-12 collects drainage from a disturbed area and is shown to be treated with straw bales and silt fence and should be labeled as an ASCA.

R645-301-740. Information related to designs for the Willow Creek channel reconstruction cannot be removed from the plan until an as-built survey detailing how the Willow Creek reconstruction meets the criteria for wildlife enhancement is provided. Details as to why construction varied from the plan and details for resulting pool and riffle construction should be provided and include an accounting of design elements that were used in the reconstructed stream sections. Correct the C-1 C-2 form so the maps and designs are retained until the survey can be conducted.

R645-301-742.221.31. 1) The plan needs to provide a) the volume(s) and pond elevation (for maximum sediment volume plus minewater volume) in all ponds proposed to contain minewater, b) show that the runoff storage volume, required for the design event, can be retained (preferred), or treated with the proposed minewater pond volume, c) the method must include a means for checking the elevation during an inspection. 2) A pond volume curve/elevation identified for the overflow water to be contained in the thickener pond is also needed.

R645-301-514.320. Sedimentation pond 013 meets MSHA criteria and needs to be monitored weekly or, provide documentation indicating MSHA has approved a reduced inspection interval. Clarify the conflicting inspection schedule in the text of the plan.

R645-301-742.110. The sedimentation ponds need to incorporate standard engineering practices including: 1) An oil skimmer on the primary spillway outlet on pond 001, 2) Adequate elevation between the primary and emergency spillway (1 ft. standard engineering practice) for ponds 001 and 002.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Cultural Resource Maps

Map 11 is a map of cultural resources in the area of the mine. Included are several historic and prehistoric sites and paleontological resources. This map has been in the confidential file and needs to remain there.

The new map has updated disturbed area information, but the baseline information has not changed. Contours are those that existed prior to construction. The map can be approved as submitted, but it needs to be in the confidential file.

Surface Water Resource Maps

Lakes, streams, ponds, and springs within and adjacent to the proposed permit area are shown on Maps 15 and 16. Map 16A and other maps show the disturbed area boundary: However, the "disturbed area boundary" is mislabeled as the "permit area boundary." The area at the north east portion of the site is disturbed in the Willow Creek buffer zone. Since the bridge, previously approved for construction, was not installed in this location, the reason for disturbing this area is not clear. If this area was not actually disturbed, the disturbed area boundary should be changed.

The regional vegetation map and regional soils map needs to be extended to include the adjacent area watersheds that report to the drainage controls at the mine. Maps 5 and 6 or the watershed maps should include this information so that appropriate CN (curve number) determinations can be verified. However, CN values and logic used appear reasonable for this region.

Vegetation Reference Area and Wildlife Maps

The applicant has chosen to include maps of the proposed Barn Canyon shaft facility. Figure 3.2-1 is a map showing vegetation communities in the area, and it can be approved.

Map 5 shows vegetation in the region, including two reference areas near the Castle Gate Preparation Plant and two near the Willow Creek Mine. The reference area in Dry Canyon is not part of the revegetation success standards, but it is understood from the applicant that it may be needed in the future. Three reference areas in Crandall Canyon are shown on other maps in the mining and reclamation plan.

The reference area shown on Maps 5 and 6 as being northeast of Eagle Canyon is actually in Eagle Canyon. These maps should show the location more accurately. The other reference areas shown on Maps 5 and 6 are in approximately the right locations. However, it should be possible to show the locations of these reference areas more precisely.

There are two other problems with Map 6 that should be corrected. The legend indicates the disturbed area boundary is marked by a solid black line, but the boundary on the map is shown by a line with two dashes. Also, this map shows the location of the lower section of Willow Creek that was relocated, but it does not show the upper section. Since this map shows premining baseline information, it would probably be best to not show the new location of Willow Creek. The location is shown on other maps.

The design of the original vegetation sampling was based on whether the site was previously disturbed, and the vegetation cover success standard is a weighted average of cover in areas previously disturbed and not previously disturbed by mining. Therefore, when sampling for revegetation success, it will be important to know exactly where the boundaries are. This information is clearly shown on Map 6 submitted with this amendment, and it is important that this information be retained in any future revisions to this map.

The Regional Wildlife Map, Map 7, has been revised to include boundaries of the current permit area and recent raptor survey information. It shows eight golden eagle nests near the surface facilities and three other raptor nests in the permit area. The map is clear and of good quality and will be useful in determining potential effects on wildlife.

Map 8 shows where biological surveys were taken in and near Willow Creek. It shows the locations of fish and macroinvertebrate sample sites, including those samples that were taken in Willow Creek before it was relocated. This map can be approved.

Water Monitoring Location Maps

Groundwater and surface-water monitoring stations are shown on Map 15 in Volume 15. Map 15, does not include the wells drilled in association with in-mine water interception associated with amendment 97-G. This information still needs to be provided and it is recommended that baseline information for wells, drilled to identify and characterize the K-Seam water and recharge source, be submitted to the Division to obtain input prior to finalizing a plan that may not be acceptable.

Findings:

Information provided in the proposal does not meet the requirements of this section of the regulations. Prior to approval, the applicant must supply the following in accordance with:

R645-301-121.200 and R645-301-140, Maps 5 and 6 need to be revised to show the correct location of the pinyon juniper reference area in Eagle Canyon. Although the maps show the approximate locations of two other reference areas in the area, it should be possible to show the locations more precisely. The legend on Map 6 has a different symbol for the disturbed area boundary than the map itself, and the map only shows one of the relocated sections of Willow Creek. Since the map shows baseline information before the creek was relocated, it would probably be best to not show the relocated sections at all.

R645-301-120. Provide a plan that is complete, clear and concise. 1) Correct the maps which have the "disturbed area boundary" mislabeled as the "permit area boundary."

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

The As-built submittal includes discussion of topsoil salvage and storage as follows:

- Topsoil Salvage
- Soil Storage in Gravel Canyon

Topsoil Salvage

Figure 3.1-1 Willow Creek Mine Barn Canyon Shaft Facility Soils Study must be checked by the soil scientist who conducted the study, Jim Nyenhuis.

Subsequent permit modifications since construction have resulted in an overall increase of disturbance acreage for the Willow Creek Mine. Updated soils operational information concerning these modifications are documented. These permit modifications include the clean coal stockpile expansion, degassification wells, Schoolhouse Canyon Refuse soil salvage, and Barn Canyon Shaft installation. The following table summarizes each of these permit modifications in terms of acreage and total soils salvaged:

Permit Area	disturbed acreage	Soil Salvage Yd^3
Barn Canyon topsoil	0.46	906
Barn Canyon subst. Topsoil	0.38	1,646
Clean Coal Pile	3.91	10,639
Schoolhouse Canyon	7.35	15,500
Degassification wells	2.2	2,319

Within the Barn Canyon disturbance area, *Map Unit A, Perma sandy loam*, is mapped in an undisturbed area under predominantly Gambel's oak vegetation. An average 2 feet of suitable soil is available for salvage and will include a 0.107 acres. Pockets of soil salvage may reach depths of 35 inches, but are not included within the projected soil salvage volumes. This soil is classified as a Mollisol which has deep rich A horizons. This soil will be salvaged and segregated other Pondsoils salvaged from this site as described on page 4.5-12 and Table 5.4-1 of the MRP. Table 4.2-1 indicates that 345.8 yards of Mollisol (Undisturbed-A) will be salvaged and placed in the Willow Creek storage location as shown on Map 18B.

Topsoil Storage

Four long-term soil storage sites are described on page 4.5-53 of the MRP. They are the Gravel Canyon site; two storage piles in Crandall Canyon; and a storage site at Willow Creek. The Mollisol soil which will be separately handled during the Barn Canyon development will be placed at the Willow Creek site as shown on Map 18B. Table 5.4-1 indicates that the Barn Canyon project will generate 2,555 CY of substitute topsoil. This is a misleading statement, actually, there will be 906 CY of topsoil salvaged and the remaining 1,646 CY qualifies as substitute topsoil to be stored at Gravel Canyon. If the entire 2,555 CY noted in Table 5.4-1 is substitute topsoil, then Table 4.2-1 is in error. Table 4.2-1 and Table 5.4-1 must be brought to agreement.

Tables 4-2.1A and Table 4-2.1 relate the projected and actual soil salvage volumes, respectively. However, in this submittal, the volumes itemized in Table 4-2.1A are actual salvage volumes. The figures in Table 4.2-1 have been altered from those in the MRP, acreage and depth of salvage have been omitted from this table and volumes do not correlate with those itemized in Table 4-2.1 of the approved MRP. Table 4-2.1 should include a subheading for topsoil salvaged from the degassification well sites. In both Table 4-2.1 and 4-2.1A, it is not clear whether the disturbed soil salvaged from 7.35 acres at the Schoolhouse Canyon site is the total projected to be salvaged or whether the acreage and yardage figures will change in the near future with refuse storage expansion. Perhaps Table 4-2.1 should be titled Actual Soil Recovery and Table 4-2.1A should be titled Projected Soil Recovery to eliminate confusion for the reader.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must provide the following in accordance with:

R645-301-121.100 and R645-301-121.200, Tables 4-2.1, Table 4-2.1A and Table 5.4-1 must be edited for clarity and brought into agreement as described in the technical analysis section above.

R645-301-222, Figure 3.1-1 Barn Canyon Shaft Facility Soils Study must be checked by the soil scientist who conducted the study, Jim Nyenhuis.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mine Facilities Maps

On May 19, 1999, Peter Hess and Wayne Western ground-truthed Map 18B, Surface Facilities Map, for the Willow Creek mine that was received on April 30, 1999. Several deficiencies were identified. They are referred to in the findings section.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the operator must provide the following in accordance with: **R645-301-521 et. sec.**

- The operator must identify the line type that is used to represent the sanitary sewer pipeline (#74), the process water pipeline, (#75) and the potable water pipeline (#76) in the legend. The Division recommends that the operator identify the pipelines with additional numbered dots.

- The operator must show all power lines and power corridors on the map. Power lines not shown on the map include, but are not limited to the power line for the PacifiCorp substation to the main mine substation, the power utility corridor from the main substation to the ventilation fan and power lines from the main substation to the mine buildings. Examples of a power line that runs from the substation to a mine building are the line to the shop building, power lines to the office trailer, and the power line on the hill behind Pond 2B.

- The dot and arrow number 88 does not point to the location of the Hilfiker retaining wall at the mine substation.

- The operator must delineate each road in the disturbed area and the delineation line must be shown in the legend.

- The operator must show the correct location for road located north of sediment pond 12A and northwest of conveyor SC4. The road terminates in the middle of the alcove on the other side of the conveyor.

- The operator must show the location of the methane degasification pipeline that runs up slope from the north side of the bathhouse/warehouse.

- The operator must show the approximate location of all noncoal mine waste dumpsters. The Division recommends that the operator use a dot with a number that represents the dumpsters to identify the noncoal waste storage areas.

- The operator must renumber the dot at the SC-1/SC-2 transfer point from #83 (temporary underground development waste) to coal processing waste. The operator must also delineate the area where coal processing waste can be stored.

- The operator must identify the SC4/SC5 transfer building.

- The operator must identify the road that approaches the southwest embankment of Pond 013A.

RECLAMATION PLAN

Analysis:

Information contained in Section 5.2.2.2, Soil Replacement Practices, shows updated soil replacement information. However, there are conflicts with soil recovery and replacement information contained in this section when comparisons are made with Table 4.2-1 as follows:

- Willow Creek Surface Facilities Area. Section 5.2.2.2 shows 135,266 CY available for the Willow Creek Surface Facilities Area reclamation. After reviewing Table 4.2-1, the 135,266 CY volume includes an additional 15,600 CY, which is the volume of soil salvaged from Schoolhouse Canyon. The extra 15,600 CY of soil should be included in the volume of soil for Schoolhouse Canyon reclamation, not the Willow Creek Surface Facilities Area. The resulting volume should be 119,666 CY with an average replacement soil depth of 16.2 inches. As a note, the 135,266 CY gives 18.3 inches of

soil replacement, not the 15 inches as shown.

- Schoolhouse Canyon Refuse Area - The volume of soil available for reclamation as shown in Section 5.2.2.2 is 97,000 CY. This volume should be increased by 15,600 CY for soil salvaged from the Schoolhouse Canyon during refuse expansion activities. This increases the total volume of soil available to 112,600 CY for a 26.8 inches effective soil replacement depth.

- Degassification Wells - The information concerning reclamation of the degassification wells has been omitted from section 5.2.2.2 and Table 4-2.1. This information should not be deleted from the MRP.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must provide the following in accordance with:

R645-301-120, There are conflicts with soil recovery and replacement information contained in Section 5.2.2.2 when comparisons are made with Table 4.2-1. For the Willow Creek Surface Facilities Area, the resulting volume should be 119,666 CY with an average replacement soil depth of 16.2 inches. For the Schoolhouse Canyon Refuse Area, the volume of soil available for reclamation should be 112,600 CY for a 26.8 inches effective soil replacement depth. Degassification well reclamation information should be retained in the MRP, section 5.2.2.2.

If you have any questions, please call.

Sincerely,

Joseph C. Helfrich
Permit Supervisor

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cc: Price Field Office
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